REMARKS

In this the first Office Action the sixteen submitted claims were variously rejected under 35 U.S.C. § 112, 102 and 103. Based upon the amendments made to the claims and the arguments set forth next, it is respectfully requested that these claims be reconsidered and allowed.

35 U.S.C. § 112 Rejections

Claims 1 and 10 have been amended to provide proper antecedents for "said outer diameter," "the upper end," and "the lower end." It is believed that with these amendments, the claims are in condition for allowance and such allowance is respectfully requested.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 3, 4, 6, 8-10, 12, 14 and 16 are rejected as being anticipated by the Chen patent.

Chen teaches away from the present invention as its goal is to prevent relative turning of the tubular members with respect to each other (column 3, lines 14-16). See also the last line of the Abstract. This is accomplished by providing a positioning element formed from an abutting block having a pointed end which abuts against a V-shaped recessed groove 21. The present invention has as its goal the ability to adjust the prosthetic pylon/foot component for toe-in or toe-out (page 2, lines 15-16). Pending independent claims 1 and 16 have been amended to recite this structural feature thereby overcoming the anticipation rejection based upon Chen. As set forth in the Background of the Invention and in the Inventor's letter attached as Exhibit A, a need exists for users of the present invention to quickly and securely adjust for toe-in and toe-out.

Claim 1 is amended to recite, in the preamble, that the socket has a pyramidal boss and that the claimed annular socket portion attaches to the "pyramidal boss of said socket" (see Figures 1 and 2). Claim 1 is amended to recite a "plurality of adjusting screws" to securely connect the annular socket portion to the socket (see screws 380 of Figures 3 and 4). These two structural elements are not disclosed in Chen.

Claim 1 is amended to recite that the annular socket portion and the pair of opposing tabs are "integrally formed on said tubular portion" (see page 8, line 3) As witnessed in

Figure 1 of Chen, clamp 3, is a separate piece from the tubular portion 1 requiring a screw 34 to connect the clamp 3 to the tubular portion 1. Such a complex mechanical arrangement is undesirable and not secure for use in a modular prosthetic system. The integral nature of the claimed invention in claim 1 provides a strong and safe modular prosthetic system for the user of the present invention.

Based on the aforesaid amendments, it is maintained that claim 1 and dependent claims 3, 4, 6, 8 and 9 are patentably distinct under § 102 as well as § 103 over Chen.

With respect to dependent claim 9, the rejection showing a modified Figure 4 of Chen does not correctly interpret original claim 9 which clearly states that the diameter of the tubular portion is "through the formed slot." The sketch in the rejection does not place the diameter through the formed slot. Furthermore, original claim 9 stated that the interior surface abuts "at least in said 45° region." Claim 9 has been amended to state "throughout said 45° region" although this is synonymous with the language of the original claim. As shown in the Chen Figure 4, modified in the Office Action, such abutting does not occur throughout the wrongly placed 45° region. Claim 9 is patentably distinct.

Claim 10, as amended, is also patentably distinct over Chen. The discussion set forth above with respect to dependent claim 9 is incorporated herein by reference. The modified Figure 4 of Chen in the Office Action does not disclose the structure claimed in Figure 5 wherein the handle has "a sufficient length to curve around said tubular portion opposite the formed slot so as to extend at least 45° beyond a diameter of the tubular portion through the formed slot" and wherein the handle has "an interior surface abutting against the outer surface of the tubular portion throughout said 45° region." As fully explained in the specification, the purpose of this is to provide a secure engagement between the handle and the tubular portion which is clearly not shown in Figure 4 of Chen. Claim 10 and its corresponding dependent claims 12 and 14 are not anticipated by Chen and are non-obvious over Chen.

Claim 16 is amended to recite the method for toe-in and toe-out adjustment of the prosthetic pylon/foot component so as to allow the prosthetic pylon/foot component to rotate with respect to the two clamp when the single lever is in the release position as fully illustrated in Figures 4 and 5. There is no disclosure whatsoever in Chen of this feature and,

in fact, Chen teaches against it. For this reason, Chen does not anticipate claim 16 nor render it obvious.

35 U.S.C. § 103

Claims 2 and 11 are rejected under 35 U.S.C. § 103(a) based upon Chen and Biedermann. While the Biedermann alignment device could be utilized with the claimed invention, it does not disclose any of the other claimed features set forth in its corresponding independent claims 1 and 10. The arguments concerning patentability of claims 1 and 10 over Chen set forth above are incorporated herein. It is acknowledged that Biedermann discloses a clamp portion at the lower end of the tubular portion but no other features of the claimed invention are found in Biedermann. Hence, it is maintained that claims 2 and 11 when read with amended claims 1 and 10 are patentably distinct over Chen in view of Biedermann.

Dependent claims 5, 7, 13 and 15 were rejected based upon Chen in view of Stefancich. The discussions concerning Chen and the amendments to independent claims 1 and 10 are incorporated herein by reference. For these reasons alone these dependent claims are patentably distinct. Stefancich is in an unrelated field and uses a clamp to support a musical instrument such as a cymbal or a drum. Such clamps are not strong and not designed to hold heavy weight such as the present invention which supports the weight of a person on one foot as a person walks or is otherwise active in movement. The bushings 43 and 44 shown are simply bushings and do not provide any threaded engagement to provide the security as taught by the present invention to prevent release and possible injury to the wearer of the prosthetic modular system. With respect to claims 5 and 13, the Office Action states:

> "...Applicant has not disclosed that the internal nylon insert provides an advantage, is used for a particular purpose, or solves a stated problem."

This is not correct. At page 11, lines 18-28, it is clearly stated and claims 5 and 13 have been so amended. The design of the clamps is entirely different than that claimed in the present invention. Claims 5 and 13 are amended to recite a threaded nylon insert.

With respect to the 35 U.S.C. § 103(a) rejection of claims 7 and 15, no reasons are set forth in the Office Action. The claimed nylon insert is shown in Figure 6 as element 610 and

is placed in the camming cup 600 (of claim 6). Clearly none of the cited references disclose, suggest, or infer this structural element. Hence, the features contained in dependent claims 7 and 15 independently provide patentability over the cited references of Chen and Stefancich.

Claims 5, 7, 13 and 15 when read with their corresponding independent claims 1 and 10 are patentably distinct over Chen in view of Stefancich. It is maintained that the claims are in condition for allowance and such allowance is respectfully requested.

New Claims

New claims 17-19 have been added. New claims 17 and 18 depend from existing claims 1 and 10. This pertains to the feature of the tension spring shown in Figures 5 and 6.

New claim 19 has been added to claim the present invention as a modular lower limb prosthetic system. It is believed that these claims are in condition for allowance and such allowance is respectfully requested.

Letter from Inventor

Attached as Exhibit A is a letter from the inventor. The inventor has firsthand knowledge of the problems associated with the need for a strong, secure (so as to prevent accidental releasing) device, yet easy to release and make adjustments to, for example, toe-in or toe-out or to provide another foot/pylon based upon the requirements of the situation.

Should you have any questions regarding the above, please feel free to give the below-listed attorney a call. If additional fees are required, please debit our Deposit Account No. 04-1414.

Respectfully submitted,

DORR, CARSON, SLOAN, BIRNEY & KRAMER, P.C.

Date: 1/27/05

By: Robert C Dorr

Robert C. Dorr
Reg. No. 27,782
3010 East 6th Avenue
Denver, Colorado 80206
(303) 333-3010

RICHARD M. BENSON

915 E. 7th St. Rifle, Co. 81650
Phone/Fax 970-625-0752
Cellular 970-618-8324

To: Mr. Alvin J. Stewart Examiner – U.S. Patent Office

From: Richard M. Benson, Inventor of record – Patent application # 10/650,647

Re: A little personal info.

Hello Mr. Stewart,

You do not know me, but, my name is Dick Benson and you are currently scrutinizing something that I feel to be a very important part of my future. The above referenced application is for a device that I came up with a while back that has made my life so much easier that I can not wait to get it out there for other amputee's, like myself, to use on a daily basis. The "quick release" device that you have been looking at is not something that is going to change the way the universe works or bring about world peace. It is a device, however, that was created, by me, out of complete necessity.

You see, Mr. Stewart, the original "tube clamp" had one inherent flaw: it was not designed for over use! The tube clamp is an important part of a modular prosthetic system. It is put into the system so as to let the amputee have a way to secure the prosthetic foot to the prosthetic socket in such a way that different angles can be applied to maintain the comfort and performance of the prosthesis. To this point in time, it has always been assumed that the tube clamp would be adjusted one time in the beginning and then left alone. Not So! For active amputee's, like myself, the tube clamp has become the means to adjust to different situations and surfaces throughout the day, every day! Toe in or toe out angles are always different to help negotiate inclines, hard to walk on surfaces, slick surfaces and even the floorboards of different vehicles. It is also very helpful to be able to simply slip the foot "off" for certain situations, driving, watching TV, reading, or simply kicking back with your feet up. Also, imagine if you will, trying to pull up a pants leg first thing in the morning with a high top work boot already laced in place to your foot. That is what it is like to try to put pants on with a prosthetic leg in place. The ability to remove the foot and simply pull the pants up and over the socket is a wonderful thing. As I said, this device will not alter the face of the world, but, it will make life a little easier for people who have been dealt a very hard blow!

The problem with the standard tube clamp lies in the "hardware". The 4mm bolt and barrel nut system that is in place on all standard tube clamps is not meant to be loosened and tightened over and over again throughout the day. After a short period of time, either the 4mm bolt or the barrel nut "strip" out and leave the amputee with absolutely no way to secure the foot to the leg. If this happens in a public place, as it did to me, it can be a real hassle, not to mention, very embarrassing ! This scenario was the catalyst that finally convinced me that something needed to be done. I got stuck in the middle of the mall and had to use duct tape to secure my foot long enough to get back to the truck.

I had been thinking for some time of the use of some sort of "cam lock" device to alleviate this problem. I went to the workshop and, to this day, I am wearing the results of that idea. The quick release tube clamp IS a "better mousetrap" if you will! Having the ability to make all the affore mentioned adjustments and maneuvers without the use of hand tools is great. Especially in my work as a home inspector. When I lost my leg, I ended up giving up a promising career as an automation mechanic with the Colorado Dept. of Transportation. Now I use my knowledge of mechanics and construction to help people decide whether or not they want to buy the home they are scrutinizing or move on to the next one. Part of these inspections involves crawling around the crawl space. Having the ability to remove the foot in this situation is a big help. It kind of blows the clients mind when I set that foot off to the side, but what the heck, right?

Exhibit A

The quick release tube clamp is unique Mr. Stewart. I recently sent Mr. Dorr my rebuttals to your objections to my application. The reason for this communication is to emphasize those rebuttals and to further convey the exclusivity of my device. It can be used nowhere else but in the use it was designed for. For that reason I feel very strongly that my device deserves the protection that a patent can offer. I would be more than happy to discuss any questions or concerns you might have. Please, do not hesitate to call me at (970) 625-0752 or (970) 618-8324. I am always available at one of these numbers,

Thank you so very much for your time. Sincerely,

Dick Benson

Dick Benson